

ABSTRACT OF THE DISCLOSURE

Only a first radio station is equipped with a local oscillation signal source. A signal transmitted to a second radio station includes local oscillation signal components used to up-convert a modulated intermediate frequency band signal in addition to intermediate frequency band signal components. The second radio station that receives the signal from the first radio station extracts and regenerate the local oscillation signal used at the first radio station using a local oscillation signal regenerator. The extracted and regenerated local oscillation signal is used to down-convert modulated radio signal components to the intermediate frequency band and simultaneously up-convert to the radio frequency band the modulated intermediate frequency band signal to be transmitted to the first radio station.